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Sheet	1	of	1
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Application Number	10/052,964
Filing Date	January 17, 2002
First Named Inventor	Cioffi
Art Unit	2602 2665
Examiner Name	Alpus H. Hsu
Attorney Docket Number	11-27725.4

[illegible][illegible]

Examiner Signature	Alvin H. Hsu
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Date Considered	1/27/05
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Signature John S. Smith

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 801.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language translation is attached.

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PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

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Substitute for Form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete If Known</b>	
Application Number					
Filing Date		01/17/02			
First Named Inventor		John M. Cioffi, et al.			
Group Art Unit		2665			
Examiner Name		Alpus H. Hsu			
Attorney Docket No.		TI-27725.4			
Sheet	1	of	1		

JCS/PTO  
 10/052964  
 01/17/02

**U.S. PATENT DOCUMENTS**

Exam. Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Doc.	Date of Pub. of Cited Doc. (mm-dd-yyyy)	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
HH	AA	4,314,376		Williams	2/1982	
	AB	4,601,045		Lubarsky	7/1986	
	AC	4,914,651		Lusignan	4/1990	
	AD	5,149,272		Acampora, et al.	9/1992	
	AE	5,272,700		Hansen, et al.	12/1993	
	AF	5,291,289		Hulvaskar	3/1994	
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	AI	5,557,612		Bingham	9/17/96	
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	AN	5,317,571		Marcel, et al.	5/31/94	
	AO	5,072,445		Nawata	12/10/91	
	AP	4,870,408		Zdunek, et al.	9/26/89	
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	AR	4,438,511		Baran	3/20/84	
	AS	5,625,651		Cioffi	4/29/97	
	AT	5,285,474		Chow, et al.	2/8/94	
	AU	5,440,561		Werronen	8/8/95	
	AV	5,043,982		Werner	8/27/91	
	AW	4,528,656		Morais	7/9/85	

**FOREIGN PATENT DOCUMENTS**

Exam. Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Doc.	Date of Pub. of Cited Doc. (mm-dd-yyyy)	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>3</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
HH	BA	PCT	WO 92/10884			06/25/92		
	BB	EPO	EP0562868A2			09/29/93		
	BC	EPO	EP0295227A1			12/14/88		
	BD	PCT	WO 85/03180			07/18/85		

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Exam. Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
HH	CA	BINGHAM, John A.C., "Multicarrier Modulation For Data Transmission - An Idea Whose Time Has Come," IEEE Communications Magazine, May 1990	
	CB		
	CC		

Examiner Signature	Date Considered
Alpus H. Hsu	1/27/05

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